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Note on the Division of the Outward Ring of Saturn. By John Hartnup, Esq., Astronomer to the Liverpool Observatory.

"I have on several occasions been requested, both by Mr. Dawes and by Mr. Lassell, to try if I could make out the division in the exterior ring of *Saturn* with the equatoreal of this Observatory.

"On the 8th of November instant, after watching the near approach of *Jupiter* to the moon, with my friend Mr. Towson, I turned the telescope on *Saturn.* The definition was scarcely better than of average goodness, 270 being the highest power that the planet could be seen with to advantage. The semi-transparent ring was seen tolerably well, and the division in the exterior ring presented itself to my view in a few seconds. To put the matter beyond a doubt, I requested Mr. Towson to look at the exterior ring, and describe to me what he saw. After a careful examination, he drew on paper a sketch of the ring, which agreed precisely with my impression, placing the division about one-third the width of the ring from the exterior edge. I then showed Mr. Towson the beautiful engraving of Mr. De la Rue for 1852, and he immediately said that the division was too near the centre of the ring; but on his seeing Mr. De la Rue's engraving for 1856, he remarked that the division was correct. It is worthy of notice, that I have frequently seen *Saturn* better defined than on this occasion, with powers of 400 and 600, without being able to detect the division in the exterior ring.

"*Observatory, Liverpool,*
Nov. 13, 1856."

Note accompanying Drawings of Mars. By Capt. W. S. Jacob, Astronomer to the H. E. I. C.'s Observatory, Madras.

The accompanying drawings of *Mars* were taken at the last opposition. They are arranged and numbered, *not* in the order in which they were observed, but in that of the revolution of *Mars,* so as to give a better notion of the succession of phases. The date at which each was taken is given below. The colours have been represented as nearly as possible: the greenish hue, which some observers have remarked in the dark spots, was not noticed; the hue appeared similar to the usual appearance of the earth's shadow on the moon, which also is frequently considered to be green, but which (when not of a coppery tinge) always appears to the writer as a neutral brown or dun. Most of the marks appear to be quite permanent. Those near the south or upper Pole of No. 4, gave the impression of a chain of lakes somewhat similar to those of North America, but larger.

The instrument used was the Lerebours' equatoreal $f = 88^{\text{in.}}\cdot 6$ $ap = 6^{\text{in.}}\cdot 25$, power 277.

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Dates of Observation.

No.	Madras Mean Time.			
		d	h	m
1	April	11	7	0
2	May	15	6	45
3	,,	12	6	50
4	,,	7	6	15
5	,,	9	10	55
6	April	21	7	20
7	,,	16	6	50

There is rather a wide gap between No. 5 and 6, the interval being about 90° of longitude; the rest follow pretty regularly at intervals of 40° to 50° round the whole circumference. The drawings are made to a scale of $0^{\text{in.}}{\cdot}15$ to $1''$.

Madras, 11 *Sept.* 1856.

The beautiful drawings alluded to in this communication, together with those of Mr. De la Rue, Mr. Brodie, and those made at the Royal Observatory at Greenwich, have been referred to a Committee of the Council, with a view of mapping out the surface of *Mars*.

Note on the Observations of Antares. By J. Hippisley, Esq.

"In reference to the observations at p. 222, vol. xvi. of the *Royal Astronomical Society's Notices*, as to the impossibility of seeing *Antares* as a double star in these latitudes, I send the following extract from my observatory memoranda:

"1856, July 20, $8^h\ 30^m$, *Antares* in the meridian, · ● the small star very well seen, with powers 150 and 234.

"$8^h\ 45^m$, δ *Cygni*, saw the small star instantly with 234.

"July 30, $8^h\ 3^m$, *Antares* seen instantly and beautifully, · ● power 234, the small star about 1·5 diameter from the larger.

"I regret that I did not use a micrometer, but merely set down the position and distance by estimation; as in the diagram, which is a facsimile traced from my note-book, and represents the small star almost exactly 'preceding.'

"I am induced to send this extract as an instance, out of many I have experienced, of the great value of the half-hour at and after sunset, for the more delicate and difficult observations in all cases where the object has light enough to be well visible telescopically by daylight, such as exists at that period. This may probably arise from the short equilibrium between the heat of day and the chill of evening; during which atmospheric disturbances, arising from the intermixture of beds of air of different temperatures and densities, may be expected to be at a minimum.

"The observations were made with a 9¼-inch Newtonian equatoreal, and *without* any previous knowledge of the angle of position of the smaller star.

"*Ston Easton, Bath,*
Oct. 26, 1856."

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